TP-LINK®

Antenna Specification

Product Number: 3101504695

Product Name: Antenna

COPYRIGHT & TRADEMARKS

http://www.tp-link.com

Product Number: 3101504695

Product Name: Antenna

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: /

Customer P/N : /

TP-LINK P/N: 3101504924

Description: Antenna|2.4-2.5GHz|2.0dBi|LP|Omni|2W|Weld|75mm|D1.37mm| 小叉(改)天线|无|X1040-RW075REV3.1|黑色/PC-HB+ABS-HB/光面+纹面|不防水|[灰色线/代 3101502557/自制件/3101503462 改线长]

TP-LINK Checked By:
Customer Approved By:

TP-LINK TECHNOLOGIES CO., LTD.

South Buiding, No.5 Keyuan Road,

Central Zone, Science&Technology Park,

Nanshan, Shenzhen, P.R.China

TEL: + 86 755 26612350

+ 86 755 26504400

http:// www.tp-link.com

Index

I. Specification

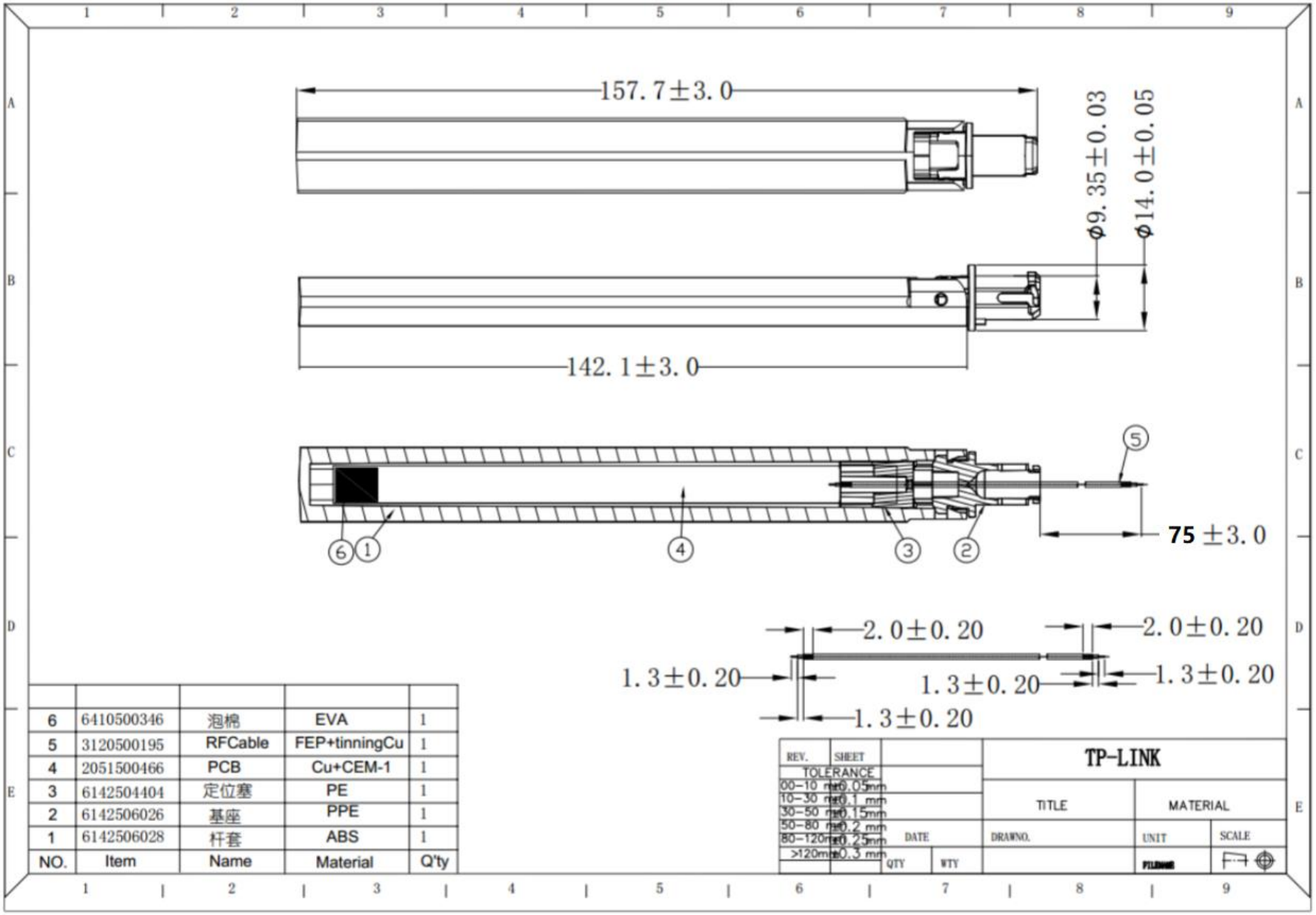
Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Gain	2.0dBi
Max Input Power	<= 2 W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body: ABS-HB Holder: PC、ABS
Cable Type	O.D. 1.37mm (gray)
Connector Type	Weld
Connector Pull Test	3.0Kg
C. Environmental	
Operation Temperature	- 10℃ ~ + 60℃
Storage Temperature	- 40℃ ~ + 70℃

II. Characteristics and Reliability Test

Test Items	**Test Condition and**	**Requirements**

		Procedure	
C1	**S.W.R.**	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	**Antenna Gain**	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	**Vibration**	MIL-STD-202G, 201 A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2.FrequencyTol.<=5%
M2	**Random Drop**	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<=5%
M3	**Drop Test**	Combine DUT with router； Height: 0.6 Meter; 1 direction; 3 times for the direction	1. No parts separated 2. Frequency Tol.<=5%
M4	**Terminal- Pull Test**	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<=5%
M5	**Dimension**	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	**Salt Spray**	SE-GS-90T Temp: 35℃; RH: 93%±3%; NaCl solution proportion: 1.026～1.041; Time:12 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E2	**Thermal Shock**	1Cycle: -20℃ (30 minutes) to +70℃ (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E3	**Life (HighTemp.)**	MIL-STD-202G,108A, cond. A Temp: 70℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

III. Mechanical Drawing and Material Description

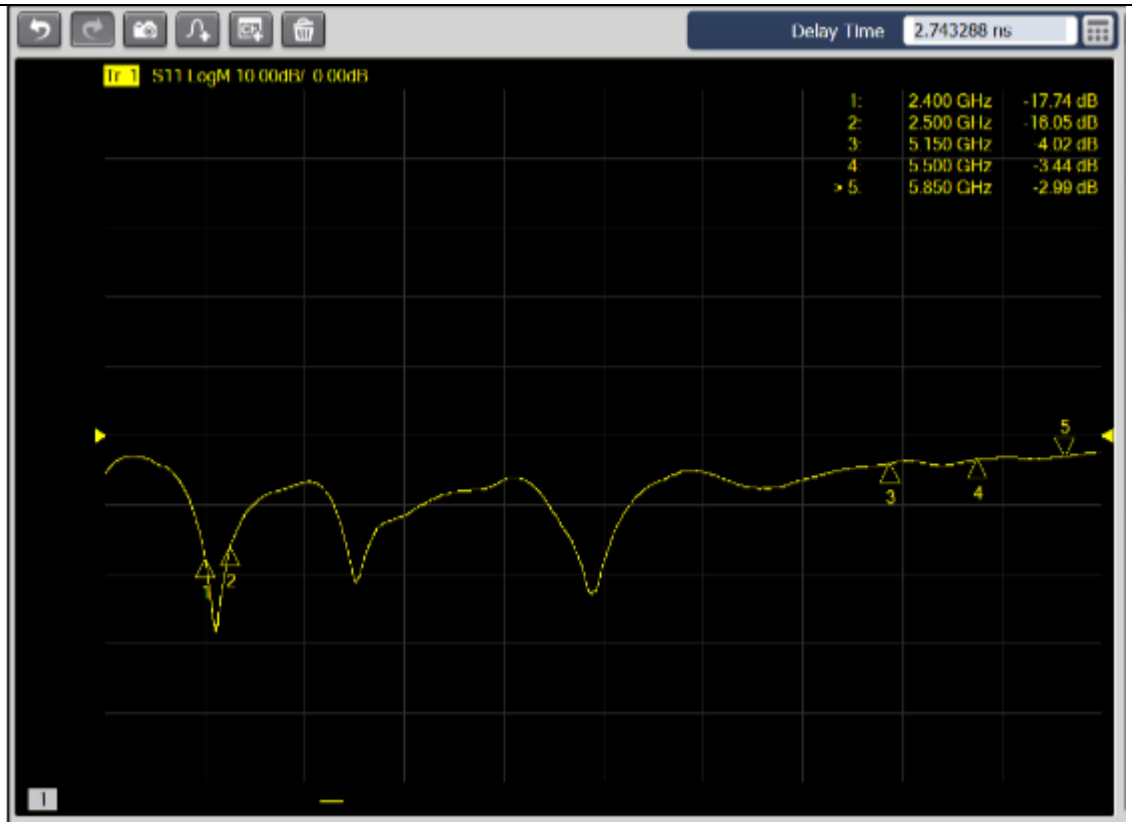


NO.	Item	Name	Material	Q'ty
6	6410500346	泡棉	EVA	1
5	3120500195	RFCable	FEP+tinningCu	1
4	2051500466	PCB	Cu+CEM-1	1
3	6142504404	定位塞	PE	1
2	6142506026	基座	PPE	1
1	6142506028	杆套	ABS	1

IV. RoHS Test Report

NO.	Product Model	Constituents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	2051500200	PCB	CEM-1	2	2	2	2				50mg/kg	50mg/kg	50mg/kg.	50mg/kg.	NO.CANEC1601019327	2016/02/01	Sub	广州 SGS
2	6142501780	Body 1	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS
			PC		N.D.		N.D.											广州 SGS
3	6142501780	Body 2	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS
			PC		N.D.		N.D.											广州 SGS
4	3110500018	Connecter	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.						CE/2012/13508	2012.01.18	-	台湾 SGS
			Copper	N.D.	17	N.D.	Negative								CE/2012/23265	2012.02.21	-	台湾 SGS
			Copper	N.D.	19	N.D.	Negative								CE/2012/25023	2012.03.02	-	台湾 SGS
5	3120500035	Cable	Cu+Sn	7	N.D.	N.D.	Negative	N.D.	N.D.		N.D	N.D	N.D	N.D	ECL03G00367502E	2014/12/08	Cable	CTI
			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		>100000	N.D	N.D	N.D	SHAEC1500664109	2015/01/13	Cable	SGS
			PET4CU8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		N.D	N.D	N.D	N.D	CANEC1420243205	2014/12/11	Cable	SGS
			Cu+Ag.	N.D.	N.D.	N.D.	Negative	N.D.	N.D.						SHAEC1507036516	2015/04/28	Cable	CTI

V. Antenna – S Parameter Test Data

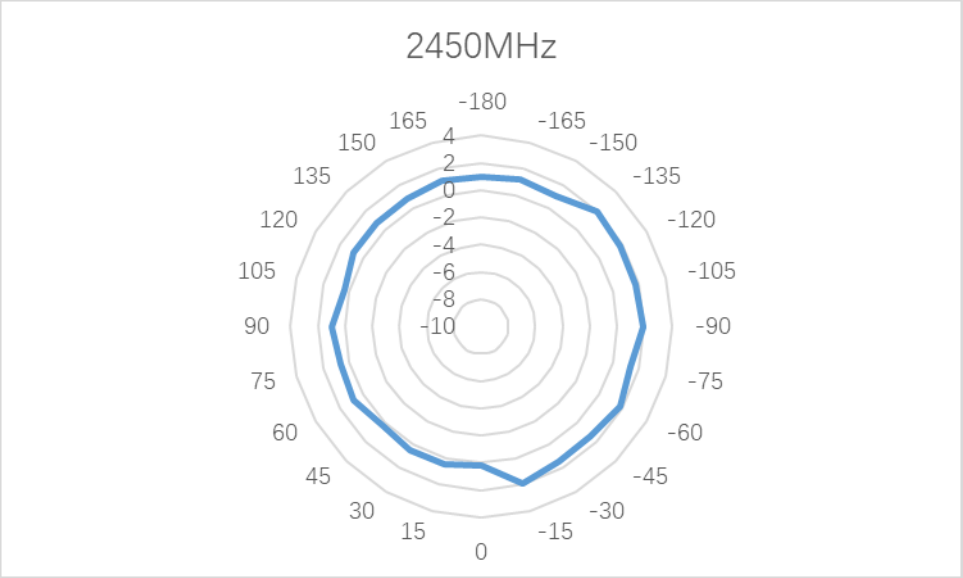


VI. Antenna – Radiation Pattern Test Data

Testing Equipment Specification	
Microwave Chamber	ETS AMS-8923
Testing Equipment	Agilent E5071C

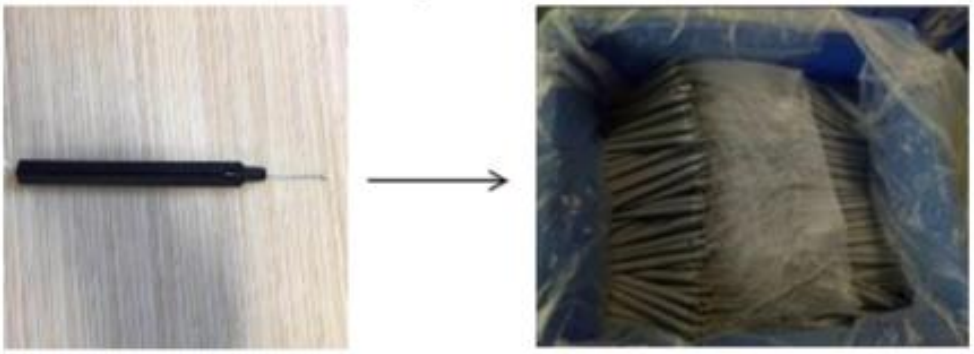
PeakGain：

Freq	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain	1.77	1.82	1.69	1.46	2	1.32	1.5	1.38	1.26	1.17

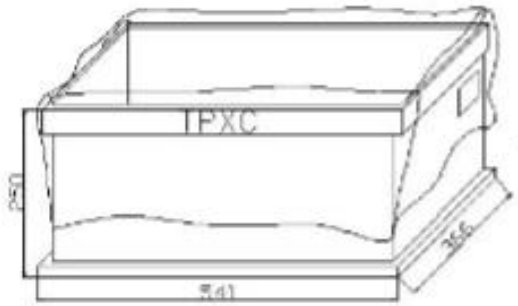

2450MHz
-180
-165
-150
-135
-120
-105
-90
-75
-60
-45
-30
-15
0
15
30
45
60
75
90
105
120
135
150
165
4
2
0
-2
-4
-6
-8
-10

VII. Packing Drawing

i . Put ANT into Plastic Tray（800PCS/BOX）（仅作装箱说明）



ii. Packing



800PCS/Box

Label

MO:		P/N:	RoHS
Specification:			
Quantity:	（PCS）	G.W:	（Kg）
Date:			
Manufacturer:	Cable manufacturing department		

iii.Sealing

TP-LINK®

Antenna Specification

Product Number: 3101504695

Product Name: Antenna

COPYRIGHT & TRADEMARKS

http://www.tp-link.com

Product Number: 3101504695

Product Name: Antenna

Specification For Approval

Date: _____

File No. : _____

Version: 1.0

Customer: /

Customer P/N : /

TP-LINK P/N: 3101504925

Description: Antenna|2.4-2.5GHz|2.0dBi|LP|Omni|2W|Weld|170mm|D1.37mm|小叉(改)天线|无|X1040-RW170REV3.1|黑色/PC-HB+ABS-HB/光面+纹面|不防水|[灰色线/代 3101502558/自制件/3101503463 改线长]

TP-LINK Checked By:
Customer Approved By:

TP-LINK TECHNOLOGIES CO., LTD.
South Buiding, No.5 Keyuan Road,
Central Zone, Science&Technology Park,
Nanshan, Shenzhen, P.R.China
TEL: + 86 755 26612350
+ 86 755 26504400
http:// www.tp-link.com

Index

I. Specification

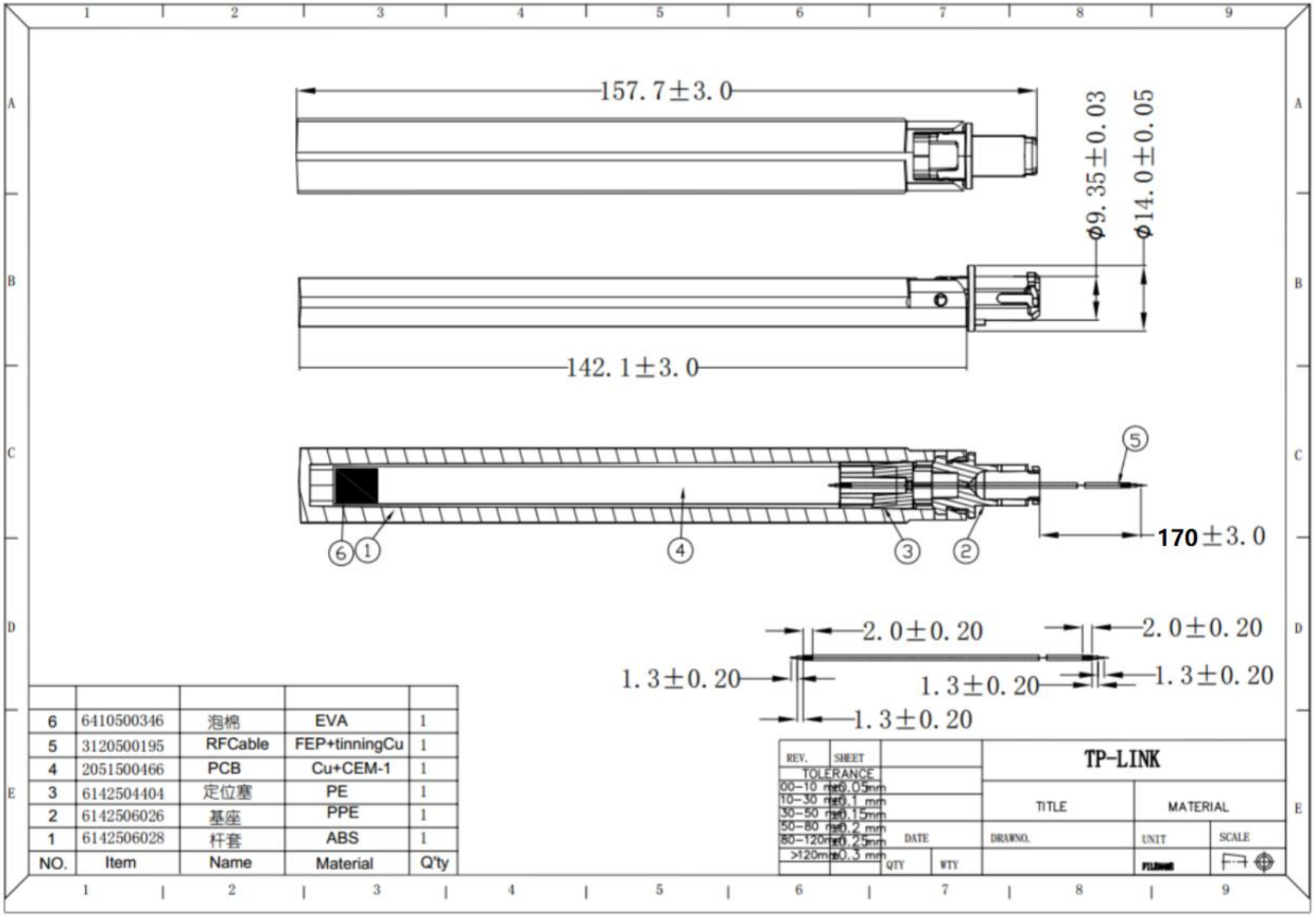
Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
Impedance	50 Ohm
S.W.R.	<= 2.0
Antenna Gain	2.0dBi
Max Input Power	<= 2 W
Polarization	Linear
Radiation pattern	Omni-Directional
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Material of Plastic	Body: ABS-HB Holder: PC、ABS
Cable Type	O.D. 1.37mm (gray)
Connector Type	Weld
Connector Pull Test	3.0Kg
C. Environmental	
Operation Temperature	- 10℃ ~ + 60℃
Storage Temperature	- 40℃ ~ + 70℃

II. Characteristics and Reliability Test

Test Items	**Test Condition and**	**Requirements**

		Procedure	
C1	**S.W.R.**	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	**Antenna Gain**	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	**Vibration**	MIL-STD-202G, 201 A Amplitude: 0.03 inch (0.76mm); Freq: 10 to 55 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2.FrequencyTol.<=5%
M2	**Random Drop**	Height: 1.5 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<=5%
M3	**Drop Test**	Combine DUT with router； Height: 0.6 Meter; 1 direction; 3 times for the direction	1. No parts separated 2. Frequency Tol.<=5%
M4	**Terminal- Pull Test**	MIL-STD-202G, 211A, cond. A Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<=5%
M5	**Dimension**	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	**Salt Spray**	SE-GS-90T Temp: 35℃; RH: 93%±3%; NaCl solution proportion: 1.026～1.041; Time:12 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E2	**Thermal Shock**	1Cycle: -20℃ (30 minutes) to +70℃ (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%
E3	**Life (HighTemp.)**	MIL-STD-202G,108A, cond. A Temp: 70℃; Time: 8 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<=5%

III. Mechanical Drawing and Material Description

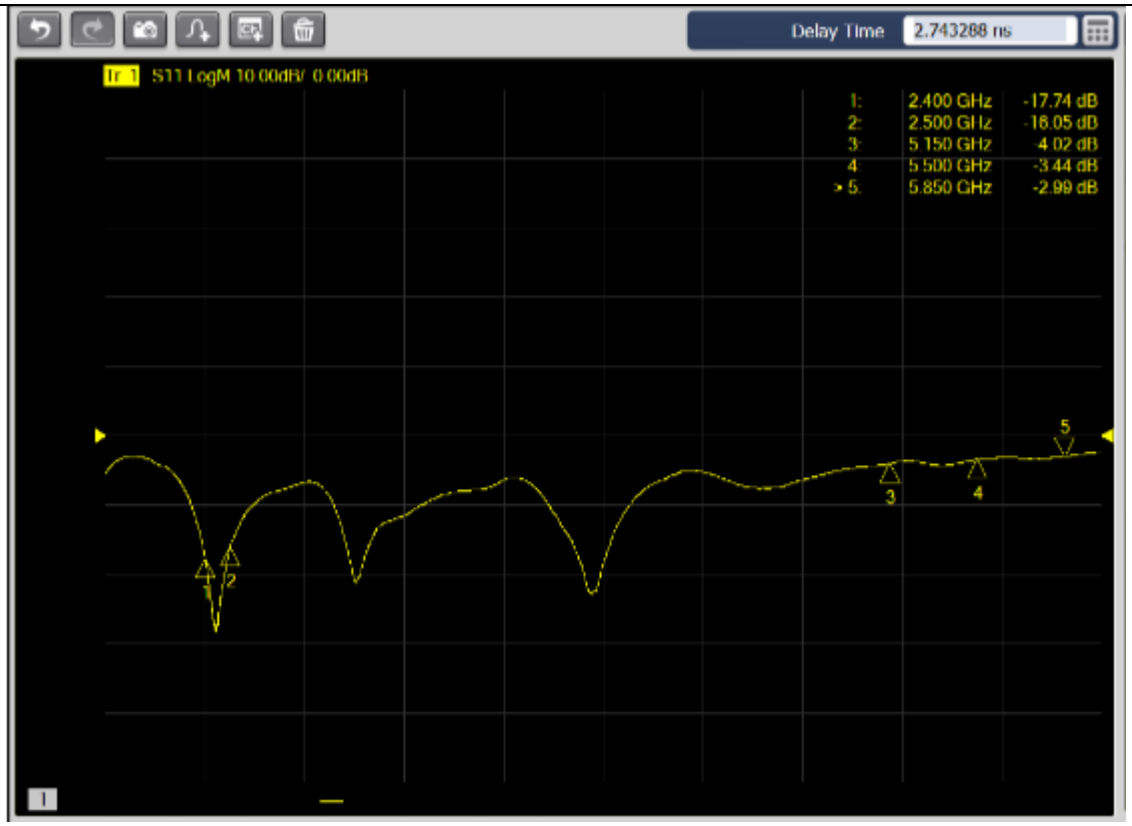


NO.	Item	Name	Material	Q'ty
6	6410500346	泡棉	EVA	1
5	3120500195	RFCable	FEP+tinningCu	1
4	2051500466	PCB	Cu+CEM-1	1
3	6142504404	定位塞	PE	1
2	6142506026	基座	PPE	1
1	6142506028	杆套	ABS	1

IV. RoHS Test Report

NO.	Product Model	Constituents	Material	Test Result for RoHS-corresponding Substance						PFOS	Halogen				Series No.	Date	Title	Test Agent
				Cd	Pb	Hg	Cr(Vl)	PBBs	PBDEs	PFOS	F	Cl	Br	I				
1	2051500200	PCB	CEM-1	2	2	2	2				50mg/kg	50mg/kg	50mg/kg.	50mg/kg.	NO.CANEC1601019327	2016/02/01	Sub	广州 SGS
2	6142501780	Body 1	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS
			PC		N.D.		N.D.											广州 SGS
3	6142501780	Body 2	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.			N.D.	N.D.		SCL01G055729002	2014/11/26	GP-1006FMR	上海 SGS
			PC		N.D.		N.D.											广州 SGS
4	3110500018	Connecter	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.						CE/2012/13508	2012.01.18	-	台湾 SGS
			Copper	N.D.	17	N.D.	Negative								CE/2012/23265	2012.02.21	-	台湾 SGS
			Copper	N.D.	19	N.D.	Negative								CE/2012/25023	2012.03.02	-	台湾 SGS
5	3120500035	Cable	Cu+Sn	7	N.D.	N.D.	Negative	N.D.	N.D.		N.D	N.D	N.D	N.D	ECL03G00367502E	2014/12/08	Cable	CTI
			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		>100000	N.D	N.D	N.D	SHAEC1500664109	2015/01/13	Cable	SGS
			PET4CU8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		N.D	N.D	N.D	N.D	CANEC1420243205	2014/12/11	Cable	SGS
			Cu+Ag.	N.D.	N.D.	N.D.	Negative	N.D.	N.D.						SHAEC1507036516	2015/04/28	Cable	CTI

V. Antenna – S Parameter Test Data

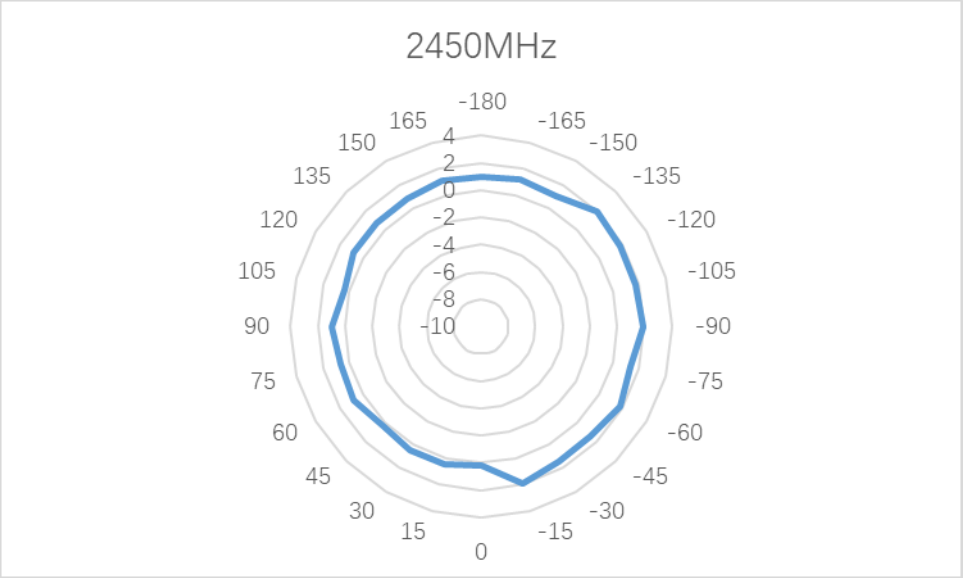


VI. Antenna – Radiation Pattern Test Data

Testing Equipment Specification	
Microwave Chamber	ETS AMS-8923
Testing Equipment	Agilent E5071C

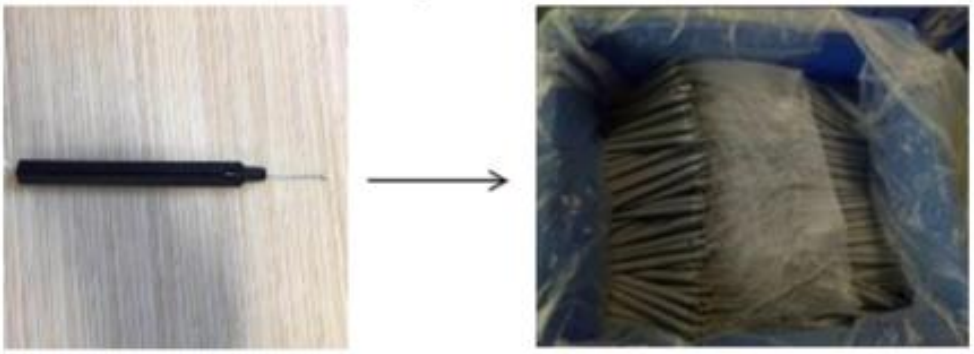
PeakGain：

Freq	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain	1.77	1.82	1.69	1.46	2	1.32	1.5	1.38	1.26	1.17

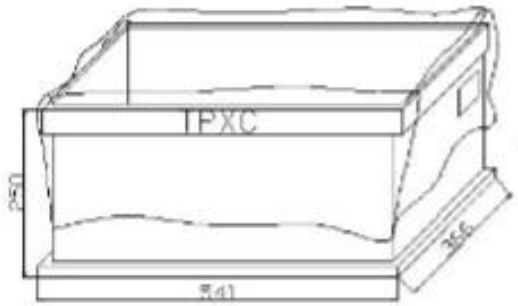

2450MHz
-180
-165
-150
-135
-120
-105
-90
-75
-60
-45
-30
-15
0
15
30
45
60
75
90
105
120
135
150
165
4
2
0
-2
-4
-6
-8
-10

VII. Packing Drawing

i . Put ANT into Plastic Tray（800PCS/BOX）（仅作装箱说明）



ii. Packing



800PCS/Box

Label

MO:		P/N:	RoHS
Specification:			
Quantity:	（PCS）	G.W:	（Kg）
Date:			
Manufacturer:	Cable manufacturing department		

iii.Sealing